Conclusions: Serial IVUS analyses suggest that FKB may improve stent apposition without impact on stent expansion and neointimal hyperplasia in bifurcation lesions treated with 1-stent technique.

TCT-690

Safety and Clinical Efficacy of Sideguard® Stent for Treatment of Bifurcation Lesions: Interim Results from the European Sideguard® Bifurcation Registry Study

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Background: The Sideguard® (Cappella) stent is a self-expanding nitinol stent specifically designed with a flaring cap for treatment of bifurcation lesions. Aim of this registry study is to assess the safety and clinical efficacy of this novel stent in treating bifurcation lesions in a real world setting.
Methods: Since June 2010 a dedicated eCRF registry has been used to collect data on all patients undergoing PCI with the Sideguard stent in the 36 participating European centres. Data collected include Patient demographics, PCI procedure and clinical follow-up up to 1 yr. Clinical end point studied includes death, myocardial infarction (MI) and target lesion revascularisation (TLR). Secondary endpoints included procedure time, fluoroscopy time, contrast volume, procedural success and device success. The study is on-going and to date complete data up to discharge is available in 320 patients and is reported here.
Results: Mean age was 65±10.6 and 247(77%) were male and 18% were diabetic. Bifurcation site was in LAD in 71%, CX in 18%, RCA in 3% and Left Main in 8%. Medina classification was 1:1:1 in 69%, 1:0:1 in 8%, 0:1:1 in 15%. Calcification was present in 28% of the cases. Mean main vessel diameter was 3.33mm±0.44mm, mean vessel stent length was 22.3mm±7.05mm Mean side branch (SB) vessel diameter was 2.75mm±0.3mm and mean SB vessel lesion length was 8.9 ± 5.9. In 12% cases a second DES stent was used in the SB distal to Sideguard stent. Final kissing balloon was attempted in 52% cases and was successful in all cases. TIMI flow pre-procedure was TIMI 3 in 80% of cases and 99% post-procedure. From the entire cohort there was a 10.6% procedural failure and a 3.7% device failure as defined by the protocol. MACE was 3.1% of 320, 6.7% of 254 & 11.2% of 107 patients at 30 days, 6 and 12 months respectively. Total stent thrombosis rate was 1.2%.
Conclusions: In this on-going registry study, the data to date shows that Sideguard® stent can be used to treat complex bifurcation lesions successfully with a very low procedural complication. Follow up clinical outcome also remains favorable though more data is required which should be available at the time of presentation.

TCT-691

The Feasibility And Safety Of Balloon Dilation Over The Jailed Wire To Reopen The (sub)Occluded Side Branch During Provisional Stenting

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Background: To evaluate the feasibility and safety of balloon dilation over the jailed wire (BDJW) to re-open (sub) totally occluded side branch during provisional stenting for bifurcation lesions.
Methods: There were 23 bifurcation lesions (4 in right coronary artery, 19 in left anterior artery) in 23 cases with abrupt (sub) total occlusion of side branch (SB) after stent implantation in main branch (MB). The mean age was 63.1 years old (range 51-78) and 77% were male. BDJW was used as a bailout technique after failure of multiple rewiring attempts. Once the small balloon (1.25-1.5 mm) has successfully entered the SB ostium under the MB stent struts, it was inflated to reopen the SB, and another guidewire was rewired from the true lumen of MB to SB. A routine manoeuvre for bifurcation was then applied and final correcting the MB stent distortion should be done by redilation of the proximal MB stent struts.
Results: The percentage rate of success was 87% (20/23) and no seriously compromises like death, acute myocardial infarction, or stent thrombosis occurred during hosptalization. Small balloon could not be advanced into SB ostium over jailed wire in 3 pts although balloon anchor and other techniques were used. Two of 5 (40%) pts with stent segment length >10mm proximal to SB ostium were successfully treated compared to all of 18 (100%, P<0.05) pts with that≤10mm. During a short follow-up period (8.2 months, range 2-24), there was no further seriously compromises or repeat revascularization.
Conclusions: BDJW can be used as a bailout technique to facilitate rewiring with a 87% success rate in case of (sub) total SB occlusion during provisional stenting. Stent segment length >10mm proximal to SB ostium was associated with a lower success rate of this technique.

TCT-692

Impact of Treatment Strategy on Clinical Outcomes Differs Between Patients with Left Main and those with Non-Left Main Bifurcation Lesions

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Background: We sought to investigate whether impact of bifurcation technique (1-versus 2-stent techniques) on clinical outcomes differed between patients with left main (LM) bifurcation lesion and those with non-LM bifurcation lesion.
Methods: A total of 2897 patients who received percutaneous coronary intervention for bifurcation lesions were enrolled from 18 centers in Korea between January 2003 and January 2010. Inclusion criteria: 1) coronary bifurcation lesions treated solely with drug-eluting stent and 2) a main vessel diameter of ≥2.5 mm and side branch diameter of ≥2.3 mm. The exclusion criteria were: 1) cardiogenic shock and 2) cardiopulmonary resuscitation before index procedure. Primary outcome was cardiac death or MI. Secondary outcome was target lesion failure (TLF) including cardiac death, myocardial infarction (MI), and target lesion revascularization.
Results: The median follow-up duration was 36 months. Among 2044 patients with non-LM bifurcation lesion, 1618 underwent 1-stent technique and 426 underwent 2-stent technique. The 2-stent group was more likely to have extensive coronary artery stenosis. After propensity-score matching, treatment with 2-stent technique was associated with a higher incidence of TLF (HR 1.59; 95% CI 1.13-2.24; p<0.01), but not of cardiac death (HR 0.95; 95% CI 0.32-2.85; p=0.93) and cardiac death or MI (HR 1.49; 95% CI 0.80-2.80; p=0.21). Among 853 patients with LM bifurcation lesions, 509 underwent 1-stent technique and 344 underwent 2-stent technique. After propensity-score matching, patients with 2-stent technique had a higher incidence of cardiac death (HR 2.66; 95% CI 1.10-6.40; p=0.02), cardiac death or MI (HR 2.31; 95% CI 1.21-4.42; p<0.01) as well as TLF (HR 3.08; 95% CI 2.04-4.64; p<0.01).
Conclusions: Compared with 1-stent technique, 2-stent technique was associated with a higher incidence of cardiac death or MI in patients with LM bifurcation lesion, but not in those with non-LM bifurcation lesion.

Left Main Stenting

Hall D

Tuesday, October, 23, 2012, 8:00 AM–10:00 AM

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TCT-693

Impact of the syntax score on the outcome of the left main after drug-eluting stent implantation

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Background: There is a debate regarding the long term results for unprotected left main bifurcation disease (uLMCA) depending on the SYNTAX score.
Methods: This analysis is based on a randomized study of 607 patients with symptomatic coronary artery disease undergoing PCI for uLMCA. 302 were assigned to receive a PES and 305 assigned to receive a SES. We evaluated the prognostic impact of the syntax score on the angiographic restenosis rate (ISR) and the need of target lesion revascularisation (TLR) for the left main itself.
Results: The 3-year resuts showed a mortality rate of 5,8% and a TLR rate of 12,5%. 235 (39%) had a true bifurcation lesion (TBL, Medina 1,1,1), associated with a higher need for multiple stents (60% vs. 19%, P<0.001), with culotte-stenting in 78% and T-stenting in 22% of cases. From the overall population of 607 patients, 204 (34%) had SYNTAX scores ≤22, 234 (39%) had scores 23-32, and 169 (28%) had scores ≥33. For the 235 patients with TBL, the distribution was different from the overall population with 15 (6%), 102 (44%), and 118 (50%), P<0.001. Angiographic restenosis rates did not differ between the three categories (14% for scores ≤22, 19% for scores 23-32, 20% for scores ≥33, P≥0.15). The need for repeat revascularization was similar for the three categories (13%, 19% and 12%, respectively, P≥0.54).